

CLAIMS

What is claimed is:

1. A composition for the treatment of acute pancreatitis in a mammal comprising,

10 a. a first element comprising a binding element able to specifically bind a pancreatic cell surface marker under physiological conditions,

15 b. a second element comprising a translocation element able to facilitate the transfer of a polypeptide across a vesicular membrane, and

20 c. a third element comprising a therapeutic element able, when present in the cytoplasm of a pancreatic cell, to inhibit enzymatic secretion by said pancreatic cell.

25 2. The composition of claim 1 wherein said pancreatic cell is an acinar cell and said cell surface marker is a CCK receptor.

3. The composition of claim 1 wherein said therapeutic element will cleave a SNARE protein and cleavage of said SNARE protein inhibits said secretion.

30 4. The composition of claim 3 wherein said SNARE protein is selected from the group consisting of syntaxin, SNAP-25 and VAMP.

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5 5. The composition of claim 2 wherein said therapeutic
element will cleave a SNARE protein, wherein cleavage
of said SNARE protein inhibits said secretion.

10 6. The composition of claim 5 wherein said SNARE protein
is selected from the group consisting of syntaxin,
SNAP-25 and VAMP.

15 7. The composition of claim 5 wherein said CCK receptor is
the human CCK A receptor.

20 8. The composition of claim 5 wherein said binding element
comprises an amino acid sequence consisting of SEQ ID
NO: 6.

25 9. The composition of claim 8 wherein said binding element
comprises an amino acid sequence consisting of SEQ ID
NO: 5.

30 10. The composition of claim 9 wherein said binding element
comprises an amino acid sequence consisting of SEQ ID
NO: 4.

11. The composition of claim 10 wherein said binding
element comprises an amino acid sequence consisting of
SEQ ID NO: 3.

35 12. The composition of claim 11 wherein said binding
element comprises an amino acid sequence consisting of
SEQ ID NO: 2.

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13. The composition of claim 1 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

10 14. The composition of claim 13 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an immunoglobulin hinge region, and a proline-containing polypeptide identical or analogous to an immunoglobulin
15 hinge region.

15. The composition of claim 14 wherein said spacer moiety comprises a proline-containing polypeptide identical or analogous to an immunoglobulin hinge region.

20 16. The composition of claim 15 wherein said polypeptide comprises an amino acid sequence consisting of SEQ ID NO:11.

25 17. The composition of claim 7 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

30 18. The composition of claim 17 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an immunoglobulin hinge region, and a proline-containing polypeptide identical or analogous to an immunoglobulin hinge region.

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19. The composition of claim 18 wherein said spacer moiety comprises a proline-containing polypeptide identical or analogous to an immunoglobulin hinge region.

10 20. The composition of claim 19 wherein said polypeptide comprises an amino acid sequence consisting of SEQ ID NO:11.

15 21. The composition of claim 8 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

20 22. The composition of claim 17 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an immunoglobulin hinge region, and a proline-containing polypeptide identical or analogous to an immunoglobulin hinge region.

25 23. The composition of claim 18 wherein said spacer moiety comprises a proline-containing polypeptide identical or analogous to an immunoglobulin hinge region.

24. The composition of claim 19 wherein said polypeptide comprises an amino acid sequence consisting of SEQ ID NO:11.

25. A method for the treatment of a mammal suffering from acute pancreatitis comprising:

5 administering to said patient a pharmaceutically effective amount of a composition comprising a first element comprising a binding element able to specifically bind a pancreatic cell surface marker under physiological conditions, a second element
10 comprising a translocation element able to facilitate the transfer of a polypeptide across a vesicular membrane, and a third element comprising a therapeutic element able, when present in the cytoplasm of a pancreatic cell, to inhibit enzymatic secretion by said
15 pancreatic cell.

26. The method of claim 25 wherein said pancreatic cell is

an acinar cell and said cell surface marker is a CCK receptor.

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27. The method of claim 26 wherein said therapeutic element will cleave a SNARE protein and cleavage of said SNARE protein inhibits said secretion.

25 28. The method of claim 27 wherein said SNARE protein is selected from the group consisting of syntaxin, SNAP-25, and VAMP.

29. The method of claim 28 wherein said CCK receptor is the
30 human CCK A receptor.

30. The method of claim 29 wherein said binding element comprises an amino acid sequence consisting of SEQ ID NO: 6.

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31. The method of claim 25 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

10 32. The method of claim 31 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an immunoglobulin hinge region, and a proline-containing polypeptide identical or analogous to an immunoglobulin 15 hinge region.

33. The method of claim 28 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

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34. The method of claim 33 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an immunoglobulin hinge region, and a proline-containing polypeptide identical or analogous to an immunoglobulin 25 hinge region.

35. The method of claim 30 wherein said composition further comprises a spacer moiety separating said binding element from said translocation element.

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36. The method of claim 35 wherein said spacer moiety comprises a moiety selected from the group consisting of a hydrocarbon, a polypeptide other than an

5 immunoglobulin hinge region, and a proline-containing
polypeptide identical or analogous to an immunoglobulin
hinge region.

10 37. The method of claim 25 wherein said composition is
formulated in an infusion solution, and is administered
to said patient intravenously.

15 38. The method of claim 31 wherein said composition is
formulated in an infusion solution, and is administered
to said patient intravenously.

20 39. The method of claim 33 wherein said composition is
formulated in an infusion solution, and is administered
to said patient intravenously.

25 40. The method of claim 35 wherein said composition is
formulated in an infusion solution, and is administered
to said patient intravenously.